Patent Office Drawings Relating to Applications

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PATENT OFFICE DRAWINGS.

One of the requirements of an application for a patent, when the invention can be illustrated, is a drawing, and when the drawing is properly prepared, although the specification may be poorly written, the Examiner has very little difficulty in understanding the invention.

Drawings have always been required, but not always up to the present standard. The old drawings were made in colors, and a tracing was also furnished, the tracing forming a part of the Letters Patent if the application became a patent.

In many of the old drawings more attention was paid to the artistic effect than to illustrating the invention. Especially was this true in agricultural implements, as the drawings would often show a landscape with trees and buildings, and the invention itself poorly illustrated.

To meet the requirements of the present time, especially since models are no longer required, the drawings should fully illustrate the invention, and be so complete that a person who is skilled in the art to which the invention relates could understand the purpose and operation of the invention without referring to the specification.

Ex parte Harlley, 97 O. G., 2746.
Ex parte Sturtevant et al., 108 O. G., 563.
Ex parte Hodges, 105 O. G., 1534.

In fulfilling the above requirements, the draftsman should not only have in mind the execution, but a drawing that shows the invention clearly, in as few views as possible.

Many of the drawings are now made in which the artistic effect seems to be more thought of than showing the invention.

The different views, to properly illustrate the invention, should be decided upon before the drawing is commenced, and how the views are to be placed upon the sheet to the best advantage to properly bring out the invention.

In many instances the draftsman unnecessarily turns the sheet of drawing upon its side and arranges the views to read lengthwise instead of across the sheet, and in so doing makes it inconvenient and a waste of time in handling and reading it; this is often done when the views could have been made across the sheet.

The attention of the Commissioner has been called to this fact, with the request that it be called to the attention of attorneys and applicants so their draftsmen would be more careful in preparing the drawings.

> "The draftsmen who follow this practice probably do not realize how objectionable it is to have the figures of a drawing appear turned upon their sides when patents and pending drawings are being searched. Every time such a drawing is handled, it is a source of annoyance, since it is much more difficult to read illustrations upon their sides than those which appear upright.
>
> "Much valuable time is lost in examination, because it is necessary to turn them to make sure that they are being read correctly, and the time wasted is not only that of the Examiner in this Office, but of attorneys and all others who may ever have occasion to examine such records; also the danger of overlooking details is also increased.
>
> "Bound volumes of patents are rendered more inconvenient."

There are occasions when it is absolutely essential that the drawings be turned, and in these cases it should be done, but the unnecessary turning should be avoided.

There are several other points that I wish to call attention to.

LETTERING THE DRAWINGS.

It would be much better if the attorneys or applicants would use numerals instead of letters, especially in a large number of cases, as the alphabet is soon exhausted and then requires exponents, and when exponents are used there is often difficulty in finding them, especially is this true on the lithographic copies, as they are reduced in size and are often blurred, as the exponents are usually much smaller than the letters of reference themselves.

If numerals were used, there would not be so much time used in locating the reference characters, since exponents would not be required.

UNNECESSARY VIEWS AND VIEWS ON TOO LARGE A SCALE.

Many cases could be properly illustrated with a fewer number of sheets of drawings, if unnecessary figures were eliminated. It is confusing, instead of increasing the clearness of the invention, to use unnecessary views.

It often occurs that figures are made to such a large scale that only one figure can be placed on a sheet, when, if made on a smaller scale, but still large enough to properly show the invention, several figures could be placed on one sheet and thus save the number of sheets required to be examined, not only by the examiner, but by every one who handles them.

SHADING.

Surface shading should be very sparingly used, as it is often confusing; this being especially true of the lithographic copy, since the required reduction makes the shading still closer, and in some cases almost impossible to understand without a very close inspection, and this close inspection requires time and would be unnecessary if the drawing was properly made; also, often some part will be overlooked on account of the confused condition, and thus a valuable reference may be overlooked.

Only such shading should be used as is open and does not tend to confuse when the drawing is lithographed.

Many drawings are finely executed but, as for showing the invention so that it may be quickly understood, are of very little account; this being caused by not properly choosing such views as will best bring out the invention.

It often occurs that there is not a single view which shows the essential parts in their cooperating relations, one with the other, but only details, and, although details are essential, it is also essential that the cooperation of the details one with the other be clearly shown.

SOLID BLACK.

Solid black should never be used to show sections, except for insulation, and then not on very large surfaces; when it is desired to show sections of metal, section lines should be used.

It has been claimed that some sections of metal, if made anywhere near to scale, would not be as thick as a fine line, and therefore a thick solid black line is used, but if the thick solid black line is an exaggeration of the thickness, why could not the exaggeration be carried still further and sections lines be used, as Patent Office drawings are not required to be to an exact scale, and the drawing be made much clearer thereby?

SHADE LINES.

Shade lines should always be used, as they help materially in reading the drawings, for often shade lines will make clear some point that otherwise would be confusing.

Many draftsmen forget in preparing their drawings that the drawings have to be reproduced by photolithographing and that the Examiner, as well as all others who make examination as to novelty, are obliged to use such reproductions instead of the originals, and that therefore it is essential that all drawings be of such a character that when reproduced they will be open and easily read.

Many of the drawings are not made to scale, in fact, could not be so made, for, if they were, some of the parts that should be clearly shown would be so small that it

would be impossible to distinguish them; so, many of the parts are made much larger in proportion than others, and it is for this reason that it has been held that the exact proportions are not necessary in Patent Office drawings, and all that is required is that an operative device be shown, so that it can be built by one who is familar with the art to which it appertains.

Ex parte Creveling, 98 O. G., 1708.

It sometimes occurs that a specification describes a construction which is not shown on the drawing, and where this is the case the drawings must be made to show what is described.

Ex parte Edgerton, 101 O. G., 1113.

If the specification describes the grain of the wood as running lengthwise, and this is included in the claims, it must be shown in the drawing.

Ex parte Davin, 100 O. G., 452.

The drawings are not complete unless they are signed by the applicant, or by his attorney, and the signature attested by two witnessess, the statute requiring that drawings be actually signed, and stamped signatures are not sufficient. Ex parte Krause, 56 O. G., 1708. A bill has passed the House, and is now pending in the Senate, doing away with attestation by witnesses. There is no objection, however, to having the drawings signed by the draftsman.

The witnesses sign the drawings not as to the invention shown, but as to the signature of the inventor or attorney.

Ex parte Kyle, 51 O. G., 1621.

If the signatures are improperly placed on the sheet, and can be erased without injury to the drawing, they can be erased and signed in the proper place, provided that the identical people, both witnesses and applicant, or his attorney, again sign the drawing; but if a new attorney or witnesses appear in the case, new drawings must be furnished.

Ex parte Zacharias, 98 O. G., 2171.
Also see Order 480-43, O. G., 1119.

When the inventor signs the drawing himself, and the signature is witnessed by two persons, the attorney can not thereafter attach his name below that of the inventor, as attorney, as it would not be necessary and would give a false impression as to the signature actually attested by the witnesses.

Ex parte McDonald, 101 O. G., 1829.

It often happens that the drawing filed does not properly show the device, and the requirement of additional figures is then proper, even if an extra sheet of drawings is required, as it is essential that every detail which goes to make the device more clearly understood by the Examiner, should be shown.

Ex parte Seitzinger, 100 O. G., 2773.

The preferred form should always be shown in the view showing the general combination.

> "Where a party wishes to claim the general combination of parts and the specific form of some of the elements, he should include the preferred form of the elements in the figure of the drawings illustrating the combination which he wishes to claim, so that all claims will read upon the device shown in a single figure."

Ex parte Welch, 93 O. G., 2104.

When the drawing is clear enough to enable those skilled in the art to make and use the invention, and when every feature of the invention that is claimed is shown, additional illustrations should not be required even if an exact scale is not used or the drawing is poorly executed.

Ex parte Turner, 101 O. G., 2078.

Drawings often require corrections after they are filed; this can be done under certain restrictions.

In the past many corrections were made, so that the examiners were unable to tell exactly what was originally filed, and in this way new matter was sometimes added.

This caused an order to be issued that no drawing be taken to the attorney's room without first filing a blue-print of the same, as originally filed, with the Examiner.

Order 1135, issued June 12, 1897, states that erasures and alterations in drawings can not be made unless a blue-print, or other photographic copy, has been filed in the case, and then the corrections or alterations could be made under the direction of the Examiner and subject to his approval.

The above order stated that alterations could not be made in the attorney's room, but attorneys could see their cases in the attorney's room without first filing a blue-print.

At the present time corrections can be made only after a black line photographic or lithographic print has been filed (Order No. 1958, Feb. 3, 1912), as blue-prints are not acceptable since it has been found that they are not permanent. The Office is often required to reproduce a drawing as originally filed, and if the drawing has been changed, and only a blue-print has been filed and it has faded, the copy could not be made. Also, all corrections now can only be made by the official draftsman of the Patent Office, Order 2112, March 30, 1914, as many corrections were made by unskilled persons who often spoiled the drawing so that it could not be lithographed without considerable extra work on the part of the Office.

All the amendments of the model, drawings or specification, and all additions thereto, must conform to at least one of them, as it was at the time of filing of the application, Rule 70.

When the drawings are unsatisfactory to the Examiner on account of their showing only detached views of details, and not the parts together in one view, so that their cooperation can be understood, the Examiner should require such a view, not only for his present use, but for future use in making searches, if the device should become patented.

It has been held that it is not always practicable for the Examiner to point out in detail just what changes would make the drawing clearly illustrate the invention, so long as he has not before him some complete representation of the invention, such as a model, and that general

objections thereto are sufficient to enable a skilled draftsman to cure the defect.

Ex parte Tuttle, 90 O. G., 1365.

When an application as originally filed describes an operation of a certain part, which would be impossible to understand without these parts being shown connected it would be proper to amend the drawings to show some form of connection.

Ex parte Wareham, 97 O. G., 1600.

A petition to amend a drawing, and thereby bring out a feature of construction not shown in the original drawing or disclosed in the specification as filed—but shown in a model, filed as an exhibit, which is not a part of the application described at the time of filing—should not be granted.

Ex parte Austin, 56 O. G., 1059.

The same part of an apparatus that appears in more than one figure of the drawing should be indicated by the same reference character, notwithstanding that one figure may be only a diagram and another a detail.

Ex parte Stimpson, 160 O. G., 1271.

When the original description and drawing disclose a complete and operative device, and the changes proposed are not to correct mere errors of the draftsman, nor to supply manifest omissions in the features of the invention, but would form the basis for description and claims not warranted, these changes should not be permitted, as it would be adding new matter.

Ex parte Alman, 97 O. G., 191.
Also Ex parte Delbey, 96 O. G., 1240.

When changes sought to be made to certain figures, which are not to correct what was unintentionally omitted from the drawing as originally filed, or not to correct a mere error on the part of the draftsman, but, on the other

hand, seeks to add an unessential feature purposely omitted from them when originally filed, these changes should not be allowed.

Ex parte Johns, 96 O. G., 1649.

Applicant should not be permitted to erase the lines of his drawings and make a new construction of a part fully shown and described, or replace a well described but inferior arrangement by a preferable form.

Ex parte Snyder, 22 O. G., 1975.
Ex parte Clay 97 O. G., 2980.

When the drawing is passed by the draftsman as for execution, and the Examiner finds no fault on account of not fully showing the invention, and the case has practically been prosecuted to an allowance, if a new drawing is filed, calling for the cancellation of the old one, it should not be accepted. To admit the same would cause an additional, unnecessary burden on the Examiner, and would be unfair to other applicants whose cases are awaiting action on the part of the Office.

Ex parte Pugh, 96 O. G., 841.

There are two principal reasons for the rules that require drawings to be limited to as few sheets as possible consistent with a clear showing of the invention:

1st. It is a serious problem to find space for the storage of the drawings, whether they be from a patent or an abandoned application, on account of the present overcrowded condition of the Office.

2d. The useless expense of lithographing unnecessary sheets for the purpose of attaching the same to the patent.

Ex parte Pfautz, 159 O. G., 489.

In the same line as the above decision, it would be well to state that multiplying the drawings unnecessarily causes extra work for the Examiner in making searches and is also a useless expense for the applicant.

Ex parte Descher, 93 O. G., 551.

Modifications described in the specification should be shown in the drawings or the description canceled.

Ex parte Peck, 96 O. G., 2409.

The statute requiring a drawing means a drawing showing what is described, and a part can not be omitted any more than the whole of it. The question is not whether the construction can be understood without a drawing, but whether it can be illustrated.

Ex parte Edgerton, 101 O. G., 1131.

When two sheets of drawings are filed with an application, and the figures on one sheet clearly illustrate all the features of construction covered by the claim, the other sheet is unnecessary and should be canceled.

Ex parte Phillips, 105 O. G., 1779.

There never should be more sheets of drawing in an application than is necessary to clearly illustrate the invention.

Ex parte Roadhouse, 111 O. G., 1368.

The question of superfluous illustrations must, in general, be decided in view of the limitations which are included by the claims, and should be insisted on only when the case has been restricted to allowable claims.

Ex parte Miller, 119 O. G., 1259.

When unnecessary figures on a drawing are required to be canceled, and the scale of the remaining figures reduced, so they could all be placed on one sheet, such a requirement is correct.

Ex parte Keil, 131 O. G., 2144.

Drawings for Designs and Trade-Marks must conform to the same requirements that govern drawings in mechanical cases.

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